**Self Study 1 - Aug. 31, 2012**

Directives for self-study assignments

The self-study assignments are opportunities for self-directed learning.  You should try to research the topic by using text books and on-line resources.  To see if you understand the material, you should write out the answers to the learning objectives.  There will be three questions on this assignment on the Unit 1 exam.

Clinical scenario:

An elderly couple had been in reasonable health until the weather turned cold that fall.  For the first time that season, they turned on the furnace and closed the windows in the house.  When their son visited them for the first time in 2 days, he noticed that they were complaining of headaches, confusion, fatigue, and some nausea.  On arrival at the emergency department, both patients were afebrile with normal vital signs and oxygen saturation of 99 percent.  Their lips appeared to be very red.  Both patients were slightly confused but otherwise oriented.  The physical examinations were within normal limits.  Based on their living circumstances and examinations, the preliminary diagnosis was carbon monoxide poisoning.

Learning issues:

1.  What are the symptoms of carbon monoxide (CO) poisoning and how is it diagnosed?

2.  What are the major protein targets bound by CO and the physiological effects of this binding?

3.  How would you differentiate between CO poisoning and flu in terms of symptoms and onset in different family members?

4.  Compare similarities and differences between CO and cyanide poisoning in terms of symptoms, mechanisms, and treatment.